

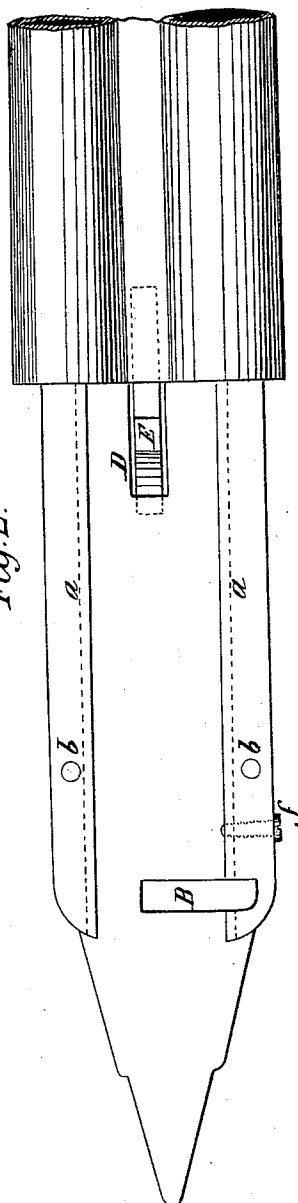
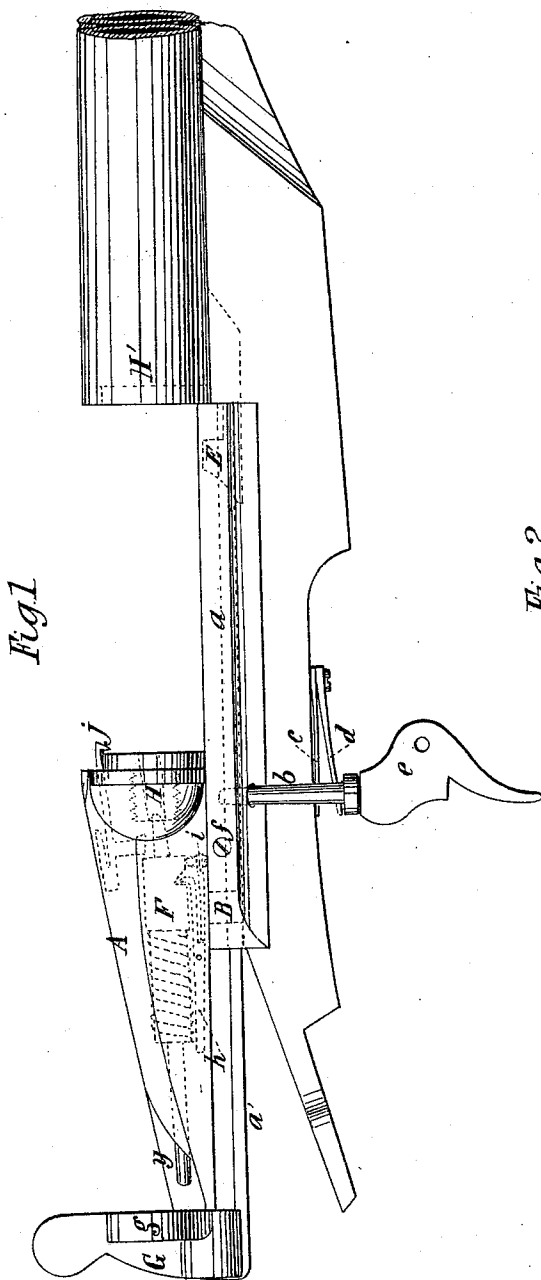
(No Model.)

2 Sheets—Sheet 1.

P. B. LATRIGE.
BREECH LOADING GUN.

No. 543,939.

Patented Aug. 6, 1895.



Witnesses:-

W. K. Boulter

C. D. Northrup

Inventor:-

Paul Brun Latrige

by his attorney W. K. Boulter

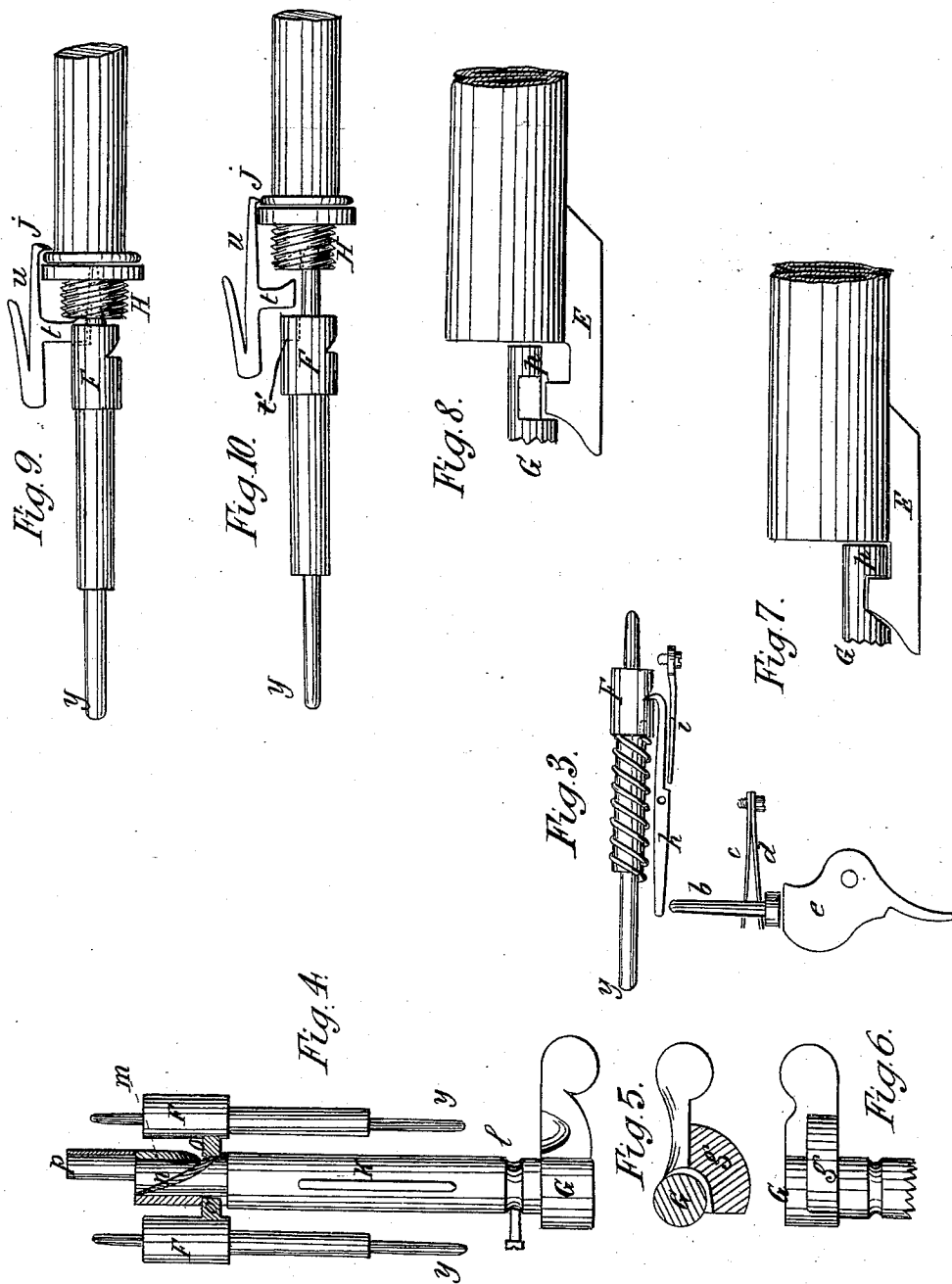
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UNITED STATES PATENT OFFICE.

PAUL BRUN LATRIGE, OF SAINT-ETIENNE, FRANCE.

BREECH-LOADING GUN.

SPECIFICATION forming part of Letters Patent No. 543,989, dated August 6, 1895.

Application filed October 23, 1893. Serial No. 488,920. (No model.) Patented in France March 24, 1893, No. 228,786; in Belgium March 27, 1893, No. 104,069, and in England March 28, 1893, No. 6,539.

To all whom it may concern:

Be it known that I, PAUL BRUN LATRIGE, a citizen of the Republic of France, residing at Saint-Etienne, France, have invented certain new and useful Improvements in Sporting-Guns, (for which I have obtained Letters Patent in France, No. 228,786, dated March 24, 1893; in Belgium, No. 104,069, dated March 27, 1893, and in England, No. 6,539, dated March 28, 1893,) of which the following is a specification.

This invention has relation to firearms, and among the objects in view is to provide a firearm which is of simple construction and readily operated; and the invention consists in the novel construction, arrangement, and combination of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the appended claims.

This invention will be best understood by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the complete breech arrangement, the breech-block A itself being drawn back. Fig. 2 is a plan of the shoe or false breech carrying the barrels of the gun. Fig. 3 illustrates by a side view the relative positions of the firing-pins F, sear h, sear-spring i, trigger e, intermediate pin b, and spring d. The respective positions of these parts upon and in relation to the breech and breech-block are, moreover, illustrated in Fig. 1. Fig. 4 represents by a plan view the breech-bolt G, which is also adapted to engage with the barrels, as illustrated in Fig. 7, and assists in locking the breech-block A upon the false breech, as hereinafter more fully explained. In this figure is also shown the relative position of the firing-pins F to the breech-bolt G when the gun is ready for firing and the grooves m n, provided to facilitate cocking. Fig. 5 is a detail sectional view of the handle of the breech-bolt G, and it also shows the heel g, whereby the block A is locked on the false breech. Fig. 6 is an under side view of the breech-bolt handle. Fig. 7 illustrates by a side view the manner in which the breech-bolt G engages with the barrel when the gun is closed and ready for firing. Fig. 8 is a similar view to Fig. 7, except that the key has been moved a quarter of a revolution, so that

it is disengaged from the barrel. Figs. 9 and 10 represent by side views the relative positions of the firing-pin, extractor, plug, and cartridge after the firing-pin has been moved forwardly and before such movement, respectively.

In a gun constructed according to this invention the barrels are stationary and the breech-block A is arranged to slide upon the false breech by means of grooves and ribs a a' provided on the sides of the breech and said breech-block. The breech carries the intermediate pins b, Figs. 1, 2, and 3, which whenever the gun is fired are retained in the position to which they are moved by a spring c, which prevents their descent, and which are acted on by another spring d, which prevents their projecting beyond the upper surface of the false breech when the trigger proper e is not pressed. The breech also carries a stop f, whereby the backward movement of the breech-block A is limited.

In Fig. 2 is shown a recess B, of suitable shape, formed in the top surface of the false breech to receive the heel g of the cocking and breech-locking key G. This recess serves for locking the breech-block to the false breech and for preventing any backward movement or recoil of the block when the gun is fired. Another recess is provided in the false breech at D to receive the hook E of the barrels, Figs. 1, 2, 7, and 8. In the false breech there are two small apertures for the points of the intermediate pins b to pass through.

Within the breech-block are located the firing-pins F, each surrounded by a spiral spring, the sear h, sear-springs i, Figs. 1 and 3, and, somewhat further in the rear, the breech-bolt G, hereinafter more particularly described. There are besides, at the front of the breech-block, cylindrical projections H, screwed or otherwise secured on the breech-block, which fit into the back ends H' of the barrels, which are provided with suitably-shaped recesses for the purpose. This projection H serves to render the connection of the breech-block with the barrels more perfect and to counteract the tendency of the block to rise under the pressure of the expanding gas when the gun is fired. The block

is further provided with two extractors *j*, hereinafter more particularly described.

The breech-bolt *G* in its closed position, together with the firing-pins in the position they occupy when the gun is ready for firing, are shown in Fig. 4. The breech-bolt consists of a cylindrical rod with a spring *K* fitted in it. It terminates at the back in a handle provided with a projection *g* of segmental shape, as shown in Fig. 4, this projection or heel *g* enters the recess *B*, Figs. 1 and 2, and thereby prevents the breech-block *A* from receding. A groove *l* and a screw engaging therewith serves to retain the breech-bolt upon the breech-block. On the front end of the breech-bolt are arranged two helical or inclined grooves *m n*, which serve for cocking the firing-pins *F*. Each of these is for the purpose provided with a lug *o*, engaging in a groove or recess provided for the purpose in the breech-block, whereby the firing-pins are effectively prevented from turning about their axes, although they may freely shift longitudinally. The point or end of each of these lugs enters a recess formed in the metal in cutting the helical grooves. It will readily be understood that when the breech-bolt is turned to its unlocking position the firing-pins, being guided by their lugs and prevented from turning on their axes, must of necessity, when the breech-bolt is turned, move along the helical inclines and back to the "cocked" position, in which they compress the spiral springs surrounding them.

The manner in which the breech-bolt is hooked on to or engages with the barrel is illustrated in Figs. 4, 7, and 8, from which it will be seen that at the extreme front end of the breech-bolt is provided the hook *p*, by which the connection or engagement with the false breech or barrels is effected. Fig. 4 shows the breech-bolt in the engaged or locking position. Fig. 7 is a side view showing the manner in which the "hooking" is effected when the breech-bolt is in the locking position, and Fig. 8 shows the position which the breech-bolt assumes in relation to the hook *E* when such hook *p* is turned a quarter of a revolution for the purpose of opening the breech.

I will now describe the system of extraction which at the same time is adapted to ejection. My extractor-ejector presents this peculiarity, that when one barrel is fired the cartridge-case of that side is ejected, while the full cartridge of the other barrel remains in the same. It is mainly necessary for extraction to take place that the firing-pins should cause the cartridge or cartridges, if both barrels are fired off, to explode. The following description will render this fact perfectly plain. The extractor consists of a two-branched spring *u*, one of the branches terminating in a hook *j*. The larger branch carries a heel *t*, which engages in a groove *t'* in the firing-pin in such a way that when the firing-pin touches

the anterior edge of the screw-plug *H*—i. e., when the gun is uncocked—the heel of the extractor is applied against this edge of the screw-plug *H*. Further, there is between the hook *j* of the extractor and the posterior extremity of the screw-plug a small space, equal in size to the rim of a cartridge-case. When one of the barrels has been fired, the extractor is pushed forward by the firing-pin *F*, which has struck upon the heel of the extractor. The large branch of the latter has been propelled and has passed over and seized the rim of the cartridge when the breech-bolt is turned for the opening of the gun. On withdrawing the block the hook *j* carries backward the fired cartridge. Since, however, it is the firing-pin which in discharging the gun has pushed on the heel of the extractor of its side and has caused it to be seized by the hook *j* the fired cartridge of this side only is extracted. On the other side—viz., in the undischarged barrel—the respective position of the parts is represented in Fig. 10. It is only after firing that the extractor seizes the rim of the cartridge and performs its function.

The extractor can only act after firing. If, for example, the left barrel of the gun has been fired and it is desired to put a fresh cartridge in this barrel on opening the gun, the cartridge on the right will not be extracted and only the cartridge-case on the left will be removed from the barrel.

My extractor can be placed above, below, or at the side of the block in a recess designed for its reception. It is capable of backward and forward motion within this, but its movements are limited by the screw-plug *H* in front.

The operation of the improved firearm will be readily understood. By pressing the trigger the intermediate pin *b* is caused to rise and release both the sear *h* and the firing-pins from the cocked position, whereupon the latter are forced forward under the action of their springs.

I claim—

1. In a breech-loading fire-arm, the combination with the breech having the longitudinal recess *D* and the transverse recess *B*, the ribs on opposite sides of the breech, the vertically-movable spring-actuated pins *b*, projecting upwardly through the breech, and the stop *f*, of the barrels having a hook engaging the recess *D*, the breech-block adapted to slide longitudinally of the breech and having grooves receiving the ribs on the breech, the projection *g*, on the breech-block adapted to enter the recess *B*, the breech-bolt carried by the breech block, the firing pins carried by the breech block, and a sear adapted to engage a firing pin and to be operated by a pin *b*, to release said firing-pin, all as and for the purpose specified.

2. In a breech-loading fire-arm, the combination with the breech, of the breech-block adapted to slide longitudinally thereon, the breech-bolt carried by the breech block and

provided with helical grooves toward its front end and adapted to be turned transversely of the breech, the firing pins each provided with a lug engaging the grooves and adapted to be automatically moved backward to a cocked position by reason of the engagement of the lugs within the grooves when the breech bolt is turned as described, the springs surrounding the firing pins and adapted to be compressed by the backward movement of the firing pins, the extractors carried by the breech block and adapted for forward and backward movement therein, said extractors consisting each of a two-branched spring *u*, one of the branches terminating in a hook *j*, and having downwardly extending projection *t*, adapted to engage in a groove *t'* in the firing pin and be struck by the latter during the forward movement thereof to cause the extractor to move forward and its hook *j*, to engage the rim of the fired cartridge, all as and for the purpose specified.

3. In a breech-loading fire-arm, the combination with the breech, of the breech-block adapted to slide longitudinally thereon, the breech-bolt carried by the breech-block and provided with helical grooves toward its front end and adapted to be turned transversely of the breech, the firing pins each provided with a lug engaging the grooves and adapted to be automatically moved backward to a cocked position by reason of the engagement of the

lugs within the grooves when the breech bolt is turned as described, the springs surrounding the firing pins and adapted to be compressed by the backward movement of the firing pins, the extractors carried by the breech block and adapted for forward and backward movement therein, said extractors consisting each of a two-branched spring *u*, one of the branches terminating in a hook *j*, and having downwardly-extending projection *t*, adapted to engage in a groove *t'* in the firing pin and be struck by the latter during the forward movement thereof to cause the extractor to move forward and its hook *j*, to engage the rim of the fired cartridge, and trigger mechanism for releasing the firing pins consisting of the sear *h*, terminating at one end in a hook adapted to engage in a notch in the firing pin, the spring *v'*, the vertically movable pin *h* adapted to strike the other end of the sear to cause the latter to release the firing pin, and a trigger adapted to operate the vertically-movable pin, all as and for the purpose specified.

In testimony whereof I have hereto set my hand in the presence of the two subscribing witnesses.

PAUL BRUN LATRIGE.

Witnesses:

V. AUTAMIN,
HASTINGS BURROUGHS.